APPENDIX I

RESTORE NATIVE ECOSYSTEMS ALTERNATIVE AND BLM POLICY ANALYSIS OF ALTERNATIVE

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RESTORE NATIVE ECOSYSTEMS ALTERNATIVE

Submitted to the Bureau of Land Management
Sixteen-state Vegetation Management Plan
Draft Environmental Impact Statement

Revised 26 August 2002
In response to Bureau of Land Management comments
and to conform to the preferred DEIS outline

RESTORE NATIVE ECOSYSTEMS ALTERNATIVE

I. OVERVIEW

GOAL OVR 1: ECOLOGICAL INTEGRITY

Enhance the ecological integrity of BLM land by restoring natural processes, native species, ecosystem function, and resilience of plant and animal communities (see Endnote 1).

Action-OVR 1

Give approximately equal overall effort to vegetation treatments that

a. **Prevent** conditions that favor vegetation problems; and
b. **Restore** ecological integrity on sites with vegetation problems.

Action-OVR 2

Base treatments on the **best available science** and knowledge.

a. Assess the likelihood that a proposed treatment will contribute to long-term ecological integrity, citing documented, relevant case examples where possible.
b. If a treatment has not previously been attempted, cite scientific evidence that the treatment could be expected to contribute to long-term ecological integrity.

Action-OVR 3

State objectives, standards and guidelines in **clear, measurable terms**, then measure the outcomes of treatments so that they can be held accountable to long-term and treatment goals.

Action-OVR 4

Perform restoration in a **precautionary** manner, recognizing that our understanding of complex ecosystems and the consequences of our activities is limited.

Action-OVR 5

Include realistic and dedicated funding for, and an institutional commitment to, **assessment, monitoring and appropriate response** to monitoring results. Design and implement assessment (including the gathering of baseline data) and monitoring systems before activities commence.

Action-OVR 6

Encourage and facilitate **public participation** by local, regional and national stakeholders in such activities as assessment, monitoring, early detection of invading species, provision of new and scientific information, review of assessment and monitoring protocols, and analysis of alternatives for actions.

Action-OVR 7

Provide:

a. clear and significant incentives (e.g., awards, grants, budgets) for prevention of vegetation problems and restoration of ecological integrity; and
b. disincentives for activities that encourage vegetation problems and delay recovery of ecological integrity.

Action-OVR 8

Ensure that treatments are **accountable to public funding.** Rely on best available science, awarding contracts on the basis of "best value" for ecological integrity, avoid treatments of symptoms, and use local community workforces whenever feasible.

II. DEFINITIONS OF TERMS USED IN THE RESTORE NATIVE ECOSYSTEMS ALTERNATIVE

Actions Activities needed to achieve desired outcomes (goals, objectives, standards), including actions to restore or protect land health. These actions include proactive measures as well as criteria that shall be applied to guide day-to-day activities occurring on public land.

Active Restoration Treatments

Actions other than suspension of activities to restore ecological integrity or native species populations. Includes, but is not limited to

1. Road and off-road vehicle route removal
2. Culvert removal
3. Prescribed burning
4. Use of biological control introductions, cultural methods, mechanical methods, chemical methods, and prescribed fire to directly act on invasive exotic species
5. Fish and wildlife habitat rehabilitation
6. Reintroduction of extirpated species
7. Planting and care of native seeds and plants
8. Reintroduction of soil biota required by native species, when necessary
9. Other necessary activities based on priorities established in the ecological restoration assessment.

Conservation Protection of landscape, ecological, and native genetic diversity and the processes that maintain them.

Ecological Integrity The ability of an ecosystem to support and maintain a balanced, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitats within the region.

Goals Goals are broad statements of desired outcomes (e.g., maintain ecosystem health and productivity).

Historical Fire Regimes The historical range of variation of fire intervals, seasons, intensities by which native vegetation and wildlife have been shaped and to which they have adapted prior to the arrival of Euro-American settlers.

Invasive Species Exotic species shown by observation and/or scientific evidence to aggressively expand their occupancy of land, whether or not they are viewed as directly impacting economic activities, or have been listed on formal "noxious weed" lists. "Invasive species" does not include native species that increase in response to particular human activities (e.g., juniper, mesquite, sagebrush).

Objectives Objectives identify specific desired conditions for resources and have established timeframes for achievement and are usually quantifiable and measurable.

Passive Restoration Treatments

Suspension of activities that cause the loss of ecological integrity or native species populations in a specific area Passive restoration treatments may include:

1. Area , road, and off-road vehicle route closures
2. Voluntary livestock permit retirement
3. Retirement of vacant livestock allotments

4. Livestock grazing exclosures (e.g., in aggressive weed infestations, uplands "at risk" of weed infestation, riparian areas, habitat of threatened or endangered species, springs, wetlands)
5. Restrictions of logging activities
6. Restrictions of oil and gas and mineral development, including allowing expired leases to remain expired
7. Restrictions on other human activities, as relevant
8. Prescribed natural fire (i.e., allowing fires to burn under predefined circumstances).

Prevention Treatments Actions that avoid causing conditions that favor the presence of invasive species. Prevention is not limited to prevention of the *introduction* of invasive species.

Restoration Actions to regain ecological integrity.

Standards Standards are limitations placed on management activities to ensure compliance with applicable laws and regulations or to limit the discretion authority in project decision-making. Compliance with relevant standards is mandatory.

Vegetation Treatments

Actions which, based on scientific evidence, will:

(1) affect the "conservation and restoration of vegetation communities, watersheds and wildlife habitats." They include:
   (a) prevention treatments that result in
      1. measurable soil, hydrological, and vegetation changes that resist invasive exotic species; or
      2. forests with understory vegetation and fire regimes that resist dense tree growth;
   (b) prevention treatments of vegetation that pose fire hazards to important ecological values or unique ecological features; and
   (c) active and passive restoration treatments that restore native vegetation and/or conditions favorable to native communities.

(2) affect the protection of human lives or property threatened by fuels, via necessary thinning/fuels reduction, or other treatments.

Wildlands-Urban Interface The area next to a home where fires most directly threaten structures and community space where there are flammable community values. Defensible community space should be created (e.g., some thinning) within a treatment zone up to 500 meters (which includes a more intensive home-site treatment zone up to 60 meters) for firefighter safety and protection of other flammable community values.

III. VEGETATION TREATMENT PLANNING

GOAL-PLAN 1

Vegetation treatments are based on assessments of (1) the condition of vegetation; (2) major human causes of degraded conditions of the vegetation; (3) opportunities for prevention of soil disturbance and vegetation problems; (4) opportunities for conservation of native vegetation ; (5) results of past restoration treatments; and (6) comparative likelihood of treatment options for achieving long-term restoration.

Action-PLAN 1

Using existing information initially, map habitats within ecoregions, watersheds, and subwatersheds of the 16 western states:

1. key areas of native vegetation and high ecological integrity; areas of mixed native and exotic vegetation and condition; and areas of low ecological integrity
2. suitable and critical habitat for habitat-specialist terrestrial and aquatic wildlife species
3. suitable habitat for wide-ranging species (e.g., bull trout and sage grouse) that require use of extensive or temporally diverse (e.g., winter/summer habitat) areas within the ecoregion
4. hotspots of plant and wildlife biodiversity
5. habitats "at risk" of further fragmentation or degradation
6. important aquatic areas, such as riparian areas, steep/unstable slopes, wet meadows, and aquatic species' strongholds
7. areas where restoration will increase potential for habitat connectivity
8. areas that could benefit from improved management or restoration to maintain or enhance ecological integrity.

Action-PLAN 2

Consult conservation center databases and other sources of information and scientists on species occurrence. Lack of data may mean no reliable inventories have been conducted.

Action-PLAN 3

Identify spatial and temporal association of particular vegetation problems and compare and contrast with the spatial and temporal occurrence of past and continuing human activities.

Action-PLAN 4

Overlay the ecoregion habitat maps with:

1. a grazing allotment assessment with the goal of phasing out grazing in sensitive areas over time. These include degraded areas, key habitats, and areas where grazing is clearly incompatible with native vegetation and habitat recovery.
2. a logging assessment with the goal of ceasing logging in areas where there is a high risk that it would thwart the recovery of native vegetation or increase existing levels of degradation.
3. a roads and off-road vehicle routes assessment with the goal of closing and decommissioning roads and off-road vehicle routes in ecologically sensitive areas including riparian areas, unstable slopes, sensitive watersheds, and wildlife migration corridors (see Endnote 2).
4. an amphibian assessment. Avoid herbicide use in amphibian habitats, as many amphibians are highly vulnerable to herbicide applications and drift.

Action-PLAN 5

Using existing data, prepare and update every three years, maps of:

1. invasive exotic species concentrations within each watershed and subwatershed.
2. exotic species plantings on BLM lands, and, when available, adjacent private and public lands.

Action-PLAN 6

Prior to implementing site-specific vegetation treatments, prepare goals based on:

1. vegetation conditions, including invasive species concentrations
2. vulnerable wildlife and plant species and habitats
3. habitat important for threatened, endangered, and sensitive species and carnivores; connectivity for habitat-specialist wildlife
4. past and present activities within the watershed leading to vegetation problems
5. passive and active restoration needs
6. feasible restoration goals

IV. SITE SELECTION AND TREATMENT PRIORITIES

A. General

Action- PRIORITIES 1

Prioritize treatments shown to have a high probability of restoring natural processes and natural biotic communities (based on previous experiments or operational use) over treatments without this kind of documentation.

Action- PRIORITIES 2

Prioritize vegetation treatments based on scientific evidence of efficacy as follows:

1. cessation of activities that impede natural recovery (i.e., passive restoration)
2. active restoration treatments that incorporate passive restoration
3. active restoration treatments to restore ecological integrity.

Action- PRIORITIES 3

Vegetation prevention and restoration treatments must utilize:

1. a precautionary approach, which, in the face of uncertain outcomes, proceeds experimentally and cautiously
2. best available science and experiential and indigenous knowledge where applicable
3. an adaptive process that regularly incorporates revisions from monitoring and evaluation
4. a public process
5. the least intrusive techniques available to restore ecological integrity
6. the least risky interventions that are likely to provide the greatest ecological benefit
7. recovery plans for threatened and endangered species, or improvements on such plans
8. prevention strategies to reduce the need for chemical and mechanical treatments, and prescribed fire, so that the number of acres treated annually with these methods will decline over the life of the EIS.

Action- PRIORITIES 4

Herbicide treatments must be of lower priority than non-chemical treatments, and shall be used only in conjunction with:

1. elimination or reduction of the conditions that have favored the presence of invasive species
2. encouragement of conditions that resist invasive species (see Endnote 3).

Action- PRIORITIES 5

Prior to implementing a site-specific treatment:

1. identify and prioritize restoration options
2. select the least intrusive/intensive methods that will effectively move the site toward the stated goals of ecological integrity
3. identify riparian conservation areas, consisting of the riparian community and hydrological energy zones; and an outer zone that provides buffers for the riparian conservation area and considers slope stability and soil erosion.

Action- PRIORITIES 6

State for all site-specific restoration projects and activities:

1. measurable conservation and restoration objectives
2. specific indicators and measures for determining results
3. timelines for analysis of whether goals, objectives and standards have been met
4. decision making processes that will be used to respond to analysis of results.

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B. Invasive Species Treatments

GOAL- PRIORITIES 1

The ecological impact of invasive species shall be minimized through conservation and restoration of native vegetation communities, watersheds and wildlife habitats.

Action- PRIORITIES 7

Give priority to two facets of the control of invasive species as defined in Executive Order No. 13112, "Invasive Species":

1. prevent the spread of invasive species from areas where they are present
2. restore native species and habitats to reduce the effects of invasive species and to prevent further invasions.

Action- PRIORITIES 8

Give treatment priority to areas in which exotic plant invasions have adverse ecological impacts on native plant communities, watersheds, and wildlife habitats.

Action- PRIORITIES 9

Develop, with the input of knowledgeable scientists and citizens, a long-term (e.g., 100-year) plan for prevention and minimization of unwanted exotic vegetation within the planning area, and restoration of ecological integrity, including native vegetation. Short-term plans (e.g., 1, 5, or 10 year horizons) will be integrated within the 100-year plan; all shall emphasize experimentation and adaptation.

Action- PRIORITIES 10

The long term vegetation management plan for integrated agency action shall include:

1. identification and lessening of the **conditions** that cause or favor the introduction, establishment, and spread of invasive species, and methods to ameliorate those conditions
2. plans for preservation or restoration of historical disturbance regimes
3. restoration of the native vegetation community, via seeding and planting, to increase resistance to invasion
4. active vegetation treatments to reduce the abundance of invasive exotic species populations.

C. Prescribed Fire, Wildfire, and Fire Suppression Treatments

GOAL- PRIORITIES 2

Natural fire regimes and native vegetation types will be restored, wherever feasible.

Action- PRIORITIES 11

Collect baseline data on historical fire regimes and plant and animal communities to use as a guide for restoration activities.

Action- PRIORITIES 1 2

Base fire management decisions on the 1995 Wildland Fire Policy, the updated 2001 Wildland Fire Policy, and current science. As required by the Fire Policy, create Fire Management Plans for every burnable acre.

Action- PRIORITIES 13

Through an open process that fully includes the public and utilizes the best available science, develop Fire Management Plans that:

1. allow certain remote wildland areas to burn under carefully prescribed conditions where ecological benefits would result
2. prescribe "Minimum Impact Suppression Tactics" where they would be most appropriate
3. prohibit aggressive soil-disturbing suppression methods where they would be damaging (e.g. bulldozers in roadless areas, chemical retardants in riparian areas)

4. determine ecological risks of fire – exotic species, population impacts - in all areas covered by plans, and carefully weigh benefits and risks as part of this process.

Action- PRIORITIES 14

Based on Fire Management Plans, use fire suppression to protect:

1. areas of high ecological values that may be at risk from exotic species invasion following fire
2. areas where human life, developed property or irreplaceable ecological values or cultural resources (e.g., rare forest types, a major portion of the population of an endangered species, or pictographs) are at stake
3. areas that should be protected until prescribed burning or other treatments can reduce excess fuels
4. important wildlife habitats (e.g., within 2 miles of sage grouse leks, big game winter ranges).

Action- PRIORITIES 15

Fire fighting shall be avoided in:

1. areas where nearby natural fire barriers such as bodies of water or rocky ridges are likely to extinguish the fire
2. Wilderness Areas, Wilderness Study Areas, roadless areas/potential wilderness areas, Wild and Scenic Rivers, and Research Natural Areas, except when fire threatens to escape from these areas or permanently impair ecological or cultural values.

Action- PRIORITIES 16

Mechanical fire suppression (i.e., with bulldozers) shall be avoided in riparian zones, steep slopes and other ecologically sensitive areas.

D. Fuels Reduction

GOAL- PRIORITIES 3

Human lives and property will be protected from wildfire and natural processes will be restored.

Action- PRIORITIES 17

Distinguish between fuels treatments intended to restore ecological integrity and those primarily intended to protect property and human life.

Action- PRIORITIES 18

Fuels reduction funds under the National Fire Plan shall be used:

1. only in the wildlands urban interface to protect lives and property
2. for strategic fire management planning and firefighter training to maximize the safety, ecological soundness, and effectiveness of fire and fuels management actions including prescribed fire, wildland fire use, and fire suppression.

Action- PRIORITIES 19

Fuels reduction shall, except for restoration or conservation necessity:

1. minimize or avoid road construction and reconstruction
2. avoid roadless areas, old growth, endangered species habitat, riparian areas, ecological sensitive areas and other areas of high ecological integrity
3. avoid habitat of threatened and endangered species.

Action- PRIORITIES 20

Fuels reduction treatments shall not:

1. increase motorized vehicle use or livestock access
2. supply biomass plants
3. increase fire risk through accumulation of activity fuels
4. include chaining

5. include clearcutting
6. limit native plant recovery through chipping or ground disturbing activities.

Action- PRIORITIES 21

Use positive economic incentives that encourage ecologically based restoration activities and eliminate incentives that encourage activities that are ecologically degrading.

1. contracts for fuels reduction/thinning for wildlands urban interface or restoration shall not include:
   a) commercial timber sales
   b) "goods for services" stewardship contracts
2. all fuel reduction projects shall be paid for by appropriated dollars and any material of commercial value shall be sold in a separate contract and all revenues shall be returned to the treasury or used to support monitoring.

V. PREVENTION VEGETATION TREATMENTS

A. General

Action- PREVENTION 1

The BLM shall not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species unless the agency has determined and made public its determination that the public benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.

B. Invasive Species

Action- PREVENTION 2

Develop and implement comprehensive, science-based protocols designed to prevent the spread of invasive species in relation to all activities on BLM lands that have been identified in the scientific literature as primary facilitators of the establishment and spread of invasive species, watershed degradation, and loss of native species.

1. Livestock Grazing

GOAL- PREVENTION 1

The introduction, establishment, and spread of invasive species due to livestock grazing shall be minimized.

Action- PREVENTION 3

Reduce spread of invasive weeds caused by domestic livestock grazing:

1. retire domestic livestock grazing permits at earliest opportunity where grazing has been found to promote invasion or persistence of invasive species
2. prioritize invasives prevention and restoration activities for areas where domestic livestock grazing has been permanently ended
3. manage livestock movement patterns to insure animals are not moving seeds of invasive species from infested to uninfested areas
4. suspend livestock grazing on non-cohesive soils in perennially saturated meadows.
5. manage livestock grazing to favor native species
6. avoid grazing in systems still containing a strong component of native perennials, biological soil crusts, or other features known to act as natural barriers to invasion or increase of invasive exotic species.

2. Roads and Off-Road Vehicles

GOAL- PREVENTION 2

Invasive species introduction, establishment and spread due to road, fire break, and off-road vehicle route construction, use, and maintenance shall be minimized.

Action- PREVENTION 4

Develop GIS maps and databases of all system (authorized and constructed) and non-system (user-created) roads and routes.

Action- PREVENTION 5

Precede all road or off-road vehicle route reconstruction, and any consideration of adding existing or illegal user-created roads and off-road vehicle routes to the transportation system, by NEPA analyses of their impacts, including potential to facilitate the spread of invasive species into native ecosystems.

Action- PREVENTION 6

Close or restrict non-essential, designated routes for motorized vehicle travel in areas of high risk for spread of invasive species.

Action- PREVENTION 7

Implement measures that reduce the likelihood of weed seed dispersal, such as educating equipment operators, implementing appropriate protocols for vehicle and equipment washing, restricting recreational access and seasonal travel. Consider restricting road grading activities in areas with high populations of invasive species.

Action- PREVENTION 8

Implement full area closures that prohibit all motorized travel on lands outside of designated and NEPA analyzed transportation system roads and off-road vehicle routes.

Action- PREVENTION 9

Identify and designate for obliteration non-essential system and non-system roads and off-road vehicle routes that do not comply with native vegetation protection goals.

Action- PREVENTION 10

Cease new road construction and most road reconstruction in riparian areas

Action- PREVENTION 11

Reclaim obliterated roads to native vegetation.

3. Fire Suppression

Action- PREVENTION 12

Utilize Minimum Impact Suppression Techniques and fully reclaim fire lines with native vegetation after fire emergency situations have ended, in order to prevent the spread of invasive species into the disturbed fire line corridors and to prevent the use of fire line corridors as illegal off-road vehicle travelways.

4. Wildland-Urban Interface

Action- PREVENTION 13

Home-site treatments in the wildland-urban interface (e.g., thinning, pruning, and mowing of vegetation) must be undertaken primarily within a 20 - 60 meter (66-200 feet) intensive treatment zone where fires most directly threaten structures and human life.

Action- PREVENTION 14

Defensible community space that may include public and private lands may be created within an additional treatment zone up to 500 meters (which includes the 60 meter home-site treatment zone) for fire fighter safety and protection of other flammable community values.

Action- PREVENTION 15

Treatments to create defensible space may include thinning small diameter trees, pruning, mowing, roof cleaning , as well as replacement of flammable landscape and building materials.

Action- PREVENTION 16

Long-term maintenance activities within the wildland-urban interface (i.e., prescribed burning, mechanical brush removal, etc.) as well as monitoring plans must be considered and a funding commitment secured before any action is undertaken.

Guideline- PREVENTION 1

Management of the wildland-urban interface zone should be a cooperative partnership between relevant agencies, tribes, communities, and homeowners. Cooperation shall extend from the initial risk assessment and following through to future maintenance and should account for appropriate access to structures for fire fighting as well as fire resistant landscaping and consideration of construction standards and proper zoning laws for all land ownerships.

Action- PREVENTION 17

Restoration priorities must be identified through a restoration assessment before any restoration fuels reduction activities take place.

5. Timber

GOAL- PREVENTION 3

The introduction, establishment, and spread of invasive species due to timber sales shall be minimized.

Action- PREVENTION 18

Maintain old-growth vegetation communities as bulwarks of vegetational resistance to invasion; minimize disturbance of old-growth or late seral vegetation communities; and, whenever possible, maintain intact forest canopies adjacent to areas such as roads and clearcuts where invasive species are abundant.

Action- PREVENTION 19

Design and plan timber sales for maximum prevention of introduction, spread, and establishment of invasive species, including pathogens.

6. Altered Hydrological Regimes

GOAL- PREVENTION 4

The introduction, establishment, and spread of invasive species due to altered flow regimes of rivers and streams will be minimized.

Action- PREVENTION 20

Prioritize treatments of riparian areas where restoration is likely to be successful; e.g., areas where the natural historic flow regime is extant.

Action- PREVENTION 21

Restore native historical flow regimes whenever it is possible to do so.

7. Oil, Gas, and Mineral Exploration and Development

GOAL- PREVENTION 5

The introduction, establishment, and spread of invasive species due to oil, gas, and mineral exploration and development will be minimized.

Action- PREVENTION 22

Prohibit surface disturbance associated with oil and gas exploration, development, and production activities in areas with

1. endangered, threatened, candidate, sensitive, or rare plant species
2. steep slopes.

Action- PREVENTION 23

Minimize surface disturbance associated with oil and gas exploration, development, and production activities in areas with sensitive soils.

Action- PREVENTION 24

In areas where seismic exploaration activities are permitted best available technologies must be used (i.e., helicopter shot-hole technologies over the use of 65,000 pound thumper trucks.

Action- PREVENTION 25

Locate wells and associated roads and pipelines on slopes less than 25% to avoid or minimize surface disturbance; on slopes greater than 25%, prohibit surface disturbing activities.

Action- PREVENTION 26

Keep removal and disturbance of vegetation to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites etc.) on both individual well locations and within oil and gas project areas.

Action- PREVENTION 27

Limit vehicular traffic to the running surface of roads and well locations as authorized in Applications for Permit to Drill (APD's) and Right of Ways (ROWs) thus prohibiting all traffic on two-tracks and trails near oil and gas well location and within oil and gas project areas.

Action- PREVENTION 28

Require that all gravel and other surfacing materials used for the project are free of noxious weeds.

Action- PREVENTION 29

Complete a survey for any and all endangered, threatened, candidate, sensitive, or rare plant species prior to allowing any surface-disturbing activities involved with oil and gas exploration, development, and production activities.

Action- PREVENTION 30

Adopt a "No Net Loss" policy for all special status plant species.

Action- PREVENTION 31

Each operator must submit a Surface Use Plan containing appropriate erosion control and revegetation measures (e.g., reintroduction of biological soil crust or mycorrhizae) with each APD request.

Action- PREVENTION 32

Grading and landscaping shall be used during and after construction activities are completed to minimize slopes, and water bars shall be installed on disturbed slopes in areas with unstable soils where seeding alone may not adequately control erosion.

Action- PREVENTION 33

Upon the completion of the drilling phase, require immediate reclamation of all portions of the pad that can be reclaimed using the soils originally removed during construction.

Action- PREVENTION 34

With each APD request, the oil and gas operators must submit a reclamation plan that includes, but shall not be limited to:

1. identification of lands to be disturbed
2. detailed description of the baseline condition and resources on the land including existing uses, soil characteristics, slope, topography, vegetative cover, and productivity
3. methods to control erosion
4. plans to revegetate and restore the areas disturbed
5. measures that address steep slopes, sensitive soils, recontouring requirements, short-term seedbed preparation measures, seeding mixtures and methods, and long-term reclamation goals
6. steps to be taken to comply with federal, state, and local environmental laws, regulations, and policies.

8. Disturbance to Biological Soil Crusts

GOAL- PREVENTION 6

Biological soil crusts shall be maintained as a partial shield preventing establishment or spread of invasive exotic species (See Endnote 4).

Action- PREVENTION 35

Using existing data, map and describe the presence and integrity of biological soil crusts at the ecoregion and watershed levels within the 16 western states; locally develop maps at the subwatershed level.

Action- PREVENTION 36

Prepare and implement a general plan for damaged biological soil crusts.

Action- PREVENTION 37

Prohibit livestock grazing for at least five years following a fire in areas capable of maintaining biological soil crusts. Return of livestock will be delayed past five years if significant recovery of the biological soil crust has not occurred.

C. Prevention of Excess Fuels

Goal- PREVENTION 7

Shrub and tree establishment shall be maintained at historical densities to prevent excess fuels.

Action- PREVENTION 38

Reduce or eliminate livestock grazing in forests and shrublands where:

1. historical grass and forb competition to tree and shrub seedlings density has been or can be diminished by grazing
2. historical understory necessary to carry "cooler" fires has been or can be diminished by grazing.

Action- PREVENTION 39

Exclude livestock for at least five years from forest and shrubland areas following fuels reduction treatments (e.g., burning, thinning), and until pre-determined native vegetation composition, density, and ground cover have been attained.

Action- PREVENTION 40

Allow wildland fire and consider prescribed burning in order to maintain capacity for cooler, understory fires within shrublands and forests.

VI. RESTORATION VEGETATION TREATMENTS

A. Direct Treatments of Invasive Species

Action- RESTORATION 1

Use the least intrusive/extensive/risky vegetation treatment methods to enhance wildlife habitat and populations.

Action- RESTORATION 2

Analyze potential effects of site-specific treatments on an array of species; reliance on assessments of effects only on umbrella species is not sufficient (see Endnote 5).

Action- RESTORATION 3

Direct treatments of invasive species shall be part of an over-all ecologically based restoration plan and may include:

1. Biological control
2. Cultural (manual) practices
3. Mechanical treatments
4. Chemical treatments
5. Prescribed fire

Action- RESTORATION 4

Base the selection of direct treatment methods on:

a. ecological priorities for restoration rather than potential economic benefits
b. size of the proposed treatment area, its location, and the biology of the target invasive species.

Action- RESTORATION 5

Except for treatment of small infestations without motorized equipment, prescribe direct treatments within designated wilderness or wilderness study areas only in conjunction with efforts to halt avoidable spread of invasive species into the wilderness from outside these areas.

Guideline- RESTORATION 1

Adopt the Carhart Model (Arthur Carhart National Wilderness Training Center) for completing minimum requirement analyses and minimum-impact tool analysis. The model assists managers in making administrative decisions concerning wilderness.

Action- RESTORATION 6

Prioritize nonchemical methods, unless shown to be ineffective, over chemical methods.

Action- RESTORATION 7

Small infestations have higher priority for active restoration treatments than large-scale infestations, with the exception of biological control. Use seasonal employees to detect and treat small infestations.

Action- RESTORATION 8

Use only those biological control agents that have been demonstrated to pose no threat to native species.

Action- RESTORATION 9
Use cultural treatments that have been shown effective in restoring native vegetation in scientific studies (e.g., use of properly timed fire, properly timed and managed goat grazing, mulching, and hand pulling) and conduct operational research to develop new, effective cultural treatments.

Action- RESTORATION 10
Plant and seed appropriate native species to compete with exotic species.

Action- RESTORATION 11
Use mechanical treatments that have been shown to be effective in restoring native vegetation in scientific studies (e.g., mowing, spot fire [flamer], mastication, weed eaters, mulching, and weed wrenches) and conduct operational research to develop new, effective mechanical treatments.
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Action- RESTORATION 12
For chemical treatments, use application methods that minimize exposure to people, wildlife, and native plants. Spot treatment methods shall be preferred over broadcast methods.

Action- RESTORATION 13
Do not use broadcast herbicide treatments within 500 feet of endangered, threatened, candidate, sensitive, or rare plants. If herbicides are necessary for protection of a rare species, allow only application methods that apply herbicides only to the target plants.

Action- RESTORATION 14
Avoid application of herbicides and prohibit broadcast spraying in riparian conservation areas. Avoid application of herbicides (e.g. atrazine) with adverse effects on aquatic species and amphibians.

Action- RESTORATION 15
Prohibit the use of herbicides in known aquatic and terrestrial amphibian habitat, including breeding, rearing, and overland dispersal areas.

Action- RESTORATION 16
Only herbicides that minimize adverse effects on environmental and human health, based on knowledge of all ingredients in the formulation, shall be utilized for chemical control.

Action- RESTORATION 17
Prohibit use of sulfonylurea herbicides and other acetolactate synthase-inhibiting herbicides due to their demonstrated ability to damage off-site native and crop species.

Action- RESTORATION 18
Design treatments to account for wildlife habitat needs, for instance, by the timing and location of activities. Avoid treatments during nesting season for migratory birds, and during identified sensitive periods for wildlife (e.g., critical wintering habitat for big game or sage grouse).

B. Prescribed Fire

Action- RESTORATION 19
Use prescribed fire to restore native vegetation, historical fire regimes, and native ecosystems; and to mitigate human safety threats, but only in concert with a restoration assessment with clear objectives, and where it will not increase invasive species.

Action- RESTORATION 20

Consideration of the following must be documented prior to prescribed burns, if relevant:

1. long-term damage to biological soil crusts
2. soil erosion through wind and runoff events
3. long-term loss of nutrients from already nutrient-deficient landscapes
4. loss of populations and habitat of special status species
5. risk of spread of invasive species
6. the levels of nuclear testing radionuclides in the immediate and adjacent area
7. interrelation between prescribed burning projects on adjacent Federal/state lands
8. indigenous uses of plants that may be impacted.
9. impacts on air quality
10. lethal effects on mature ponderosa pine, particularly from fire damage of roots

Action- RESTORATION 21

Burned areas (natural or prescribed) must be protected from livestock grazing for at least five years and until measurable recovery criteria are met.

Action- RESTORATION 22

Prescribed burning teams shall:

1. use existing roads
2. limit ground disturbance
3. address risk of fire spreading beyond the project area and onto surrounding lands.

C. Fuels Reduction

Action- RESTORATION 23

Fuels reduction to restore natural fire processes shall be based on comprehensive restoration assessments with clear objectives, in conjunction with other active or passive methods.

Action- RESTORATION 24

Following fire, all standing trees shall be left for wildlife habitat, soil stability, and nutrient cycling, except where removal is necessary to maintain public safety or to restore ecological integrity (e.g., possible removal of small green trees that "should" have burned, so that future fires can burn more naturally).

D. Fire Suppression

Action- RESTORATION 25

Minimize introduction of invasive species during and after fire suppression operations:

1. clean equipment of invasive species seeds before moving equipment off roads to build fire breaks
2. seal all firebreaks to prevent off-road vehicle access.

Action- RESTORATION 26

Minimize post-fire disturbance to burned areas to allow natural recovery.

Action- RESTORATION 27

Monitor all fire camps and helicopter spots for invasive species following fire.

E. Forage Enhancement

Action- RESTORATION 28

Conduct forage enhancement projects only if they incorporate ecological principles to encourage native species, and will not result in any net loss of native plant communities.

VII. REVEGETATION

Action- REVEGETATION 1
In revegetation efforts, whenever it is possible to do so, use native seed and seedlings that have been grown from seeds of locally adapted populations.

Action- REVEGETATION 2
If native seeds/plants are not available, revegetation projects will rarely be undertaken until native plant seed or plants become available. Non-native plant species will be used only in extremely degraded/severely altered systems as an intermediate step toward/placeholder for native restoration, accompanied by a full commitment to complete restoration of native species. This commitment must include funds set aside as part of the project, with specific deadlines for accomplishment.

Action- REVEGETATION 3
When reseeding with non-native species, certification must be provided that only species that have been documented as non-persistent are present in the seeding mixture.

Action- REVEGETATION 4
Assure availability of native seed and plants:
1. establish BLM contracting systems that will provide growers the necessary assurance their native, locally-adapted seed/plants will be purchased if grown
2. establish sufficient storage facilities for native seeds for major revegetation efforts.

Action- REVEGETATION 5
Determine, in landscape, watershed, and subwatershed vegetation assessments, the feasibility of providing habitat for wildlife and plant species that have been extirpated or nearly extirpated.

Action- REVEGETATION 6
Prepare a public report on potential reintroduction of extirpated species, including foreseeable human activities or developments that would foreclose options for such reintroductions.

Action- REVEGETATION 7
Collaborate with federal, state, local and private land managers to reduce sale and planting of exotic invasive species, and increase availability and use of appropriate native species, with particular attention to inholdings and other lands adjacent to BLM lands.

Action- REVEGETATION 8
Focus invasive species public education programs on 10-20 of the most ecologically problematic local invasive species and those that have the potential to invade a given District. Include information about how these species are introduced to public lands.

Action- REVEGETATION 9
Following fire or other disturbances, do not propose reseeding unless it can be shown that natural regeneration is unlikely. Use native species unless they are not available. Always use certified weed-free seed.

VIII. MONITORING AND EVALUATION

Action- MONITOR 1
Before resources are committed to modify a plant community, gather baseline data to reflect existing conditions. If treatments are initiated, data shall be collected to substantiate whether or not any of the

goals, objectives, and standards have been met. If baseline and post-treatment evaluation monies are not available, then the project shall not be approved (see Endnote 6).

Action -MONITOR 2

Monitoring must be used to:

1. inventory baseline conditions at the landscape, watershed, subwatershed, and project site levels
2. measure whether positive goals for native ecosystem recovery, conservation, and integrity are being attained
3. track biodiversity and health using an increaser/decreaser species procedure (including biological soil crusts, wildlife, and endemic/sensitive species)
4. practice precaution, retain flexibility, and respond to change, unforeseen harm, failure to reach objectives, and/or new information
5. quantify invasive species population changes
6. establish success/problems with specific prevention and restoration treatments in a variety of sites.

Action- MONITOR 3

Monitoring and evaluation of vegetation treatments shall:

1. relate to the clearly stated objectives of all restoration projects
2. be an integral component of each restoration project
3. be incorporated into the essential costs of each project
4. use scientific principles of experimental design including replication and measurements from untreated control areas for comparison with treated locations
5. use a process responsive to all-party and scientific input
6. encourage involvement of local, regional and national stakeholders
7. be documented in a sixteen-state central database with assessments, objectives, monitoring procedures, and analyses in comparable formats
8. outline clear procedures for responding to monitoring and evaluation results

Action- MONITOR 4

Monitoring methods shall be:

1. Relevant: evaluates progress toward stated objectives
2. Sensitive: quickly detects change, shows trends, identifies critical features
3. Available: inexpensive, easily applied
4. Measurable: accurately quantifiable with acceptable methods
5. Defensible: minimally subject to individual bias
6. Verifiable: allows others applying the same methods to achieve similar results
7. Inclusive: avoids reductionism, where feasible
8. Scheduled: monitoring interval firmly scheduled.

Action- MONITOR 5

Goals, objectives, and standards must be written for all projects tiered to this EIS. All projects must be monitored to determine if their goals, objections, standards, and guidelines are being met on schedule.

Action- MONITOR 6

Objectives and standards must be written in such a manner as to be measurable with concrete ecosystem indicators. Reliance on "professional judgment" without evidence should be minimized, so that conclusions and ecosystem conditions can be independently verified.

Action- MONITOR 7

Each District must prepare an annual monitoring report of all vegetation restoration projects (passive and active). These reports should be available at a central BLM location (see Endnote 7).

Action- MONITOR 8

Each District must annually report whether goals, objectives, and standards are being met. For those that are not being met, indicate plans for meeting them.

Action- MONITOR 9

All proposals to undertake a vegetation restoration activity must include a description of the monitoring that will be necessary to determine the compatibility of the activity with specific goals, objectives, and standards; and the treatment efficacy.

Action- MONITOR 10

Require the submission of an annual monitoring plan at or near any and all locations disturbed by oil and gas activities before granting approval of an Application for Permit to Drill.

Action- MONITOR 11

Annually monitor for five years all firelines, fire camps, helicopter spots, and fire retardant-treated areas for invasive species; eliminate introduced invasive species.

Action- MONITOR 12

Monitor progress toward attainment of long term health and integrity of the watershed, aquatic, riparian, and native vegetation and soil resources.

IX. TRIBAL RELATIONS FOR VEGETATION TREATMENTS

GOAL- TRIBES 1

Native American Indian concerns and issues relative to vegetation prevention and restoration treatments are addressed and mitigated in full collaboration with Native Tribal people.

Action- TRIBES 1

Consultation and collaboration with Native Tribes shall take place throughout the process of developing and implementing this EIS in accordance with Executive Order No. 13084, Consultation and Coordination with Indian Tribal Governments.

Action-TRIBES 2

Contact Native Tribal representatives from Tribal governments and organizations when vegetation treatments are being planned. Give particular attention to consultation and collaboration with local Tribal people when activities may affect Native cultural resources, hunting, fishing and gathering areas, sacred sites, or Tribal trust lands.

Action- TRIBES 3

Analyze treatment proposals pursuant to Executive Order No. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

Action- TRIBES 4

In collaboration with Tribal people, identify culturally significant plants used for food, basketweaving and other fibers, medicine, and ceremonial purposes.

Action- TRIBES 5

Develop protocols for enhancement and protection of culturally significant plants:

1. utilize traditional indigenous knowledge and wisdom to protect and enhance native vegetation communities, native resources, and ecosystems.
2. prioritize treatments that will enhance and preserve culturally significant plants and animals.

3. use minimal impact vegetation treatments or avoidance where culturally significant species are known to occur. Vegetation treatments will not result in net loss of native species of importance to indigenous people for subsistence or cultural purposes.

Action- TRIBES 6

Establish herbicide-free zones to protect culturally significant plant and wildlife resources.

Action- TRIBES 7

Provide notification to Indian communities of the exact locations, dates, and times that herbicide applications will take place, via letters of notification and posting in prominent locations (such as community bulletin boards and local post offices). Also, prior to and following treatments, post boundaries of treated lands where traditional activities may occur, to ensure notification of elders and traditionalists and protect their health.

Action- TRIBES 8

Monitor the impacts of different vegetation treatments upon the viability and health of culturally significant plants and animals. Adapt treatment approaches as necessary to ensure culturally significant plant and animal resources are protected for seven generations.

X. COORDINATION, EDUCATION, AND PUBLIC AWARENESS

Action- CEPA 1

Identify activities that prevent, minimize, or reverse (as well as facilitate) the introduction, establishment, spread, and reinvasion of specific invasive exotic plant species (e.g., cheatgrass, ventanata, starthistle) on BLM lands.

Action- CEPA2

Incorporate findings of the analysis (CEPA-1) in all site-specific treatment decisions.

Action- CEPA 3

Develop and maintain a central web site featuring prevention and passive and active restoration treatments, including:

1. scientific literature on treatment outcomes of relevance to BLM lands
2. BLM projects that have resulted in reestablishment of native vegetation, reintroduction of extirpated species, increase in sensitive species populations, reduction in acres needing restoration treatments, or reestablishment of natural fire regimes
3. successful BLM projects or programs to alter activities that have facilitated the introduction, establishment and spread of invasive species.

Action- CEPA 4

Establish annual awards to BLM employees, Districts, and inholding landowners for accomplishments such as:

1. successful passive and active restoration of native vegetation
2. equality of effort to prevention and restoration treatments
3. exemplary monitoring
4. significant involvement of NGOs, students, and other volunteers in conservation and restoration activities.

Action- CEPA 5

Eliminate funding based on acres of vegetation directly treated the previous year without (a) documented alteration of the conditions that favored the presence of the vegetation that was directly treated and (b) restoration programs to restore the site to native vegetation.

Guideline- CEPA 1

Offer simple invasive exotic species reporting forms to BLM lands visitors in order to encourage the reporting of locations in which particular invasive species are present.

Action- CEPA 6

Educate the public, including owners of lands neighboring BLM lands, about:

1. the natural role of fire and protecting their homes from fire through the Fire Wise Program
2. prevention of invasive species introduction, establishment, and spread.

Endnotes

1. Vegetation (and thus ecosystem) problems on BLM lands in sixteen western U.S. states include fragmentation; simplified ecosystems; invasive exotic species; altered fire regimes; compacted and otherwise heavily-disturbed soils; and impaired watersheds, with disturbed upland and riparian systems.

2. The three most common activities on public lands managed by the BLM that continue to contribute to declining watershed health are:
   - *Livestock grazing*, which has caused severe, widespread, long-lasting damage to soils, vegetation, riparian areas, streams, and associated species;
   - *Roads*, which damage water quality, riparian areas, the quantity and timing of water flows, aquatic and riparian flora and fauna, and the overall hydrologic and ecological functions of watersheds; and
   - *Logging*, which has contributed to degradation of water quality, riparian areas, soils, vegetation, and aquatic resources.

   These activities lead to elevated sedimentation, degraded soils, degraded riparian areas, and altered stream flows within much of the BLM-managed landscape. Fire in watersheds, a natural process, plays a far smaller role in watershed degradation than these activities.

3. This prioritization is essential, as herbicides can (1) have numerous adverse toxic effects on workers; nearby residents; beneficial soil organisms; and native plant, aquatic, terrestrial and avian species; (2) simplify the vegetation community; and (3) render the treated site more vulnerable to return of invasive species. Herbicides alone do not address the conditions that favor the introduction, establishment and spread of invasive species, and yet they are often used as stand-alone technological “fixes.”

4. These crusts of lower plants and cyanobacteria cover soil surfaces between individual plants in healthy arid grasslands, shrublands, and dry woodlands. While they fix nitrogen, increase soil fertility, improve water infiltration, stabilize soils, and enhance the establishment of vascular plants, they also may provide a shield that reduces or prevents establishment and spread of exotic species. Biological soil crusts are particularly susceptible to damage from physical disturbance.

5. An example of the insufficiency of analysis for effects solely on an umbrella species involves sagebrush canopy “thinning” for sage grouse. This may negatively impact nesting cover for migratory bird species of concern.

6. There is an obvious, admitted, ongoing, and institutional failure to adequately monitor, survey, and document the impacts of human activities on habitats, native vegetation, and native wildlife on federal public lands. Even when monitoring has occurred, land managers have rarely translated the findings into management improvements. Good intentions and monitoring plans have been insufficient to direct sufficient funding, staff, or attention to the outcomes of vegetation and other restoration treatments, among other human activities. It is essential that both the continuation and initiation of vegetation restoration activities be dependent upon prior adequate baseline and post-treatment monitoring. “We do what we get funded for" is neither a legally sufficient nor an ecologically responsible approach to the required, continuous finding of compatibility of treatment activities with the goals, objectives, standards, and guidelines of this EIS.

7. Monitoring needs to be documented so that it can be independently reviewed by non-BLM scientists, the scientifically literate public, and others who are concerned about the ecological health of the nation’s federal public lands.

Bureau of Land Management National Policy Analysis of Restore Native Ecosystems Proposal

In 2002, a comprehensive proposal was submitted by a citizen's coalition during scoping for the PEIS. This proposal (Alternative E in the PEIS, and often referred to in public comments as the Restore Native Ecosystems proposal) was included as Appendix G in the Draft PEIS. In order to determine whether the proposal had merit for analysis relative to the proposed action, or should be dismissed from detailed analysis, a comprehensive policy review was conducted of the proposal. The policy review was conducted by the BLM's National Science and Technology Center in Denver, Colorado, during 2002. This review was not included in the Draft PEIS, but has been included in the Final PEIS in response to public comments on how the proposal was evaluated in the PEIS.

The proposal as submitted provided the source and framework for the limited herbicide use alternative analyzed in the PEIS as Alternative E. In order to develop Alternative E for analysis in the PEIS, certain components of the proposal that were relevant and applicable to herbicide use under the proposed action were carried forward into the alternative analyzed in the PEIS. The remaining content of the proposal was determined to be either already covered under existing BLM policy and, therefore, already a component of the Preferred Alternative (Alternative B), or determined to be outside the scope of analysis for this PEIS.

The following Table summarizes the BLM's national policy review of the proposal. The policy analysis comprises identification of the individual Goals and Actions outlined in the proposal. Each Goal or Action then has a determination whether it is included in current BLM policy (Yes/No) and a citation for the policy. Under Policy Analysis, a brief summary is provided outlining the policy. Under Alternative Comparison, the Alternatives that apply to the policy are identified. In most cases, this is "common to all alternatives." The last column outlines the programmatic net effect or impact of the policy if the analysis is different from that presented in the PEIS, or outside the scope of analysis.

TABLE I-1
Bureau of Land Management Policy Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Ecological Integrity	OVR 1		41; BLM Mission Statement	Policy	Common to all alternatives.	None
	OVR 1	Yes	43	Prevention of conditions that favor vegetation problems and restoration of ecological integrity in the project design.	Common to all alternatives. Alternative E would emphasize overall equal effort to these considerations, however, these are already considered together in the project design for vegetation treatments as part of integrated vegetation management. Prevention and restoration have equal consideration under BLM vegetation strategies.	None
	OVR 2	Yes	29, 41, 42, and 43	Assessment of treatments and citations of scientific literature are accomplished through project design proposals and associated NEPA analyses.	Common to all alternatives.	None
	OVR 3	Yes	1, 23, 27, and 42	BLM policy is to state objectives, standards, and guidelines in quantifiable terms where possible. Monitoring of outcomes is built into project design.	Common to all alternatives.	None

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Ecological Integrity (Cont.)	OVR 4	Yes	41, 42, and 43	The BLM recognizes the limitations of the understanding of complex ecosystems and the effects of activities on them.	Alternative E would mandate use of the "Precautionary Principle" in all restoration activities. The Precautionary Principle emphasizes not taking action due to limited knowledge, and therefore would favor passive management over active treatments.	Addressed in impact analysis in PEIS and PER.
	OVR 5	Yes	18, 41, 42, and 44	Monitoring is part of project design.	Common to all alternatives.	None
	OVR 6	Yes	1, 26, 29, and 32	Public participation is encouraged whenever possible in all BLM activities.	Common to all alternatives.	None
	OVR 7	Yes	29, 41, and 43; Federal Acquisition Regulations (FARs); and Title 4 Appropriations	BLM provides incentives and disincentives for public lands activities.	Common to all alternatives.	None
	OVR 8	Yes	Title 4 Appropriations and Government Performance and Results Act	Congress has mandated BLM be accountable to public funding.	Common to all alternatives.	None
Definitions		No		Many of the definitions used in the RNE proposal do not comport with agency usage or definitions contained in policy, law, regulations, or executive order.	Alternative E only.	None

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Vegetation Treatment Planning	PLAN 1	Yes	1,5, and 32	BLM considers a wide range of factors in planning vegetation treatments including, but not limited to, those outlined in the RNE proposal.	Common to all alternatives.	None
	PLAN 1	Yes	1, 5, and 32	Requirements to map habitat variables including, but not limited to, those listed, are included in land use planning policy guidance. In addition, there are several mapping initiatives and efforts that address various components at different spatial scales, these include , but are not limited to, efforts such as LANDFIRE, GAP, and Re-GAP.	Common to all alternatives.	Mapping all the variables at multiple spatial scales across the 17 states analyzed in the PEIS is beyond the scope of analysis of the proposed action. Some of the habitat variables are best suited for local (field office-level) spatial effects analysis, whereas other habitat variables are best suited for broad-scale spatial effects analysis. Broad spatial scale mapping analyses are already occurring for these types of habitat variables by BLM and other agencies and have been incorporated into the PEIS analysis as appropriate.
	PLAN 2	Yes	6, 9, 26, and 27	BLM regularly consults with conservation centers, natural heritage centers, the Services, and other data sources on species occurrences.	Common to all alternatives.	None.
	PLAN 3	Yes			Common to all alternatives.	None.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Vegetation Treatment Planning (Cont.)	PLAN 4	No		Assessment goals are contrary to established uses under FLPMA.	Alternative E only.	The assessments are better suited for spatial analysis at the local field office level. These data are not available at the broad programmatic scale of this PEIS analysis at this time and the cost to obtain these data would be exorbitant due to the site-specific scale. Herbicide use in amphibian habitats is addressed in Chapter 4 of the PEIS and PER under Wildlife Resources.
	PLAN 5	Yes	16, 32, and 40	BLM conducts invasive species inventories on a 3 year cycle. BLM does not map exotic species plantings on a broad scale. Existing seedings are platted on master title plats (MTPs) and can be considered in local vegetation management planning at the field office level.	Common to all alternatives.	None.
	PLAN 6	Yes	5, 32, 40, 43, and 50	Actions are included in BLM assessment process	Common to all alternatives.	None.
Site Selection and Treatment Priorities	PRIORITY 1	Yes	4, 16, 32, 40, 41, 43, and 44	BLM treatment priorities consider probability of success.	Common to all alternatives.	None.
	PRIORITY 2	Yes	4, 16, 32, 40, and 44	BLM vegetation treatment priorities are based on land use planning goals	Alternative E only.	Addressed in impacts analysis in PEIS

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Site Selection Priorities (Cont.)	PRIORITY 3	Yes	3, 5, 26, and 42	All planning factors listed are considered in the vegetation treatment design.	Common to all alternatives.	There is no BLM policy on using the Precautionary Principle. However, the BLM does approach projects with uncertain outcomes experimentally and uses adaptive management based on effectiveness monitoring results.
	PRIORITY 4	Yes	4, 7, 32, 40, and 58	Same as BLM herbicide treatment priority policy for all herbicide use activities.	Alternatives A through D. Alternative E would add elimination or reduction of the conditions favoring the presence of invasive species and encourage conditions that resist invasive species in conjunction with herbicide use.	Would narrow the scope of herbicide treatment to invasive species only. The BLM herbicide use activity encompasses a broader range of activities than only invasive species. Limiting herbicide use to invasive species would not fully meet the purpose and need of the PEIS.
	PRIORITY 5	Yes	41, 44, and 59		Common to all alternatives.	None.
	PRIORITY 6	Yes	4, 5, 32, 38, 41, et al.		Common to all alternatives.	None.
Invasive Species Treatments	PRIORITY 1	Yes	4, 18, 32, 38, 41, and 42		Common to all alternatives.	None.
	PRIORITY 7	Yes	4, 16, 32, 40, and 41	Policy by Executive Order and Native Invasive Species Management Plan	Common to all alternatives.	None.
	PRIORITY 8	Yes	59	Policy by Executive Order	Common to all alternatives.	None.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Invasive Species Treatments (Cont.)	PRIORITY 9	Yes	16 and 32	National and local level long-term and short-term plans for prevention and minimization inclusive of adaptive management already exist.	Alternatives A through D. Alternative E would develop 100 year plans.	BLM land use planning horizons are 20 years. National Invasive Species Council Management Plan is not necessarily time sensitive and represents on-going policy until changed by Congress or the President.
	PRIORITY 10	Yes	4, 16, 32, et al.	Restoration of historical disturbance regimes, native vegetation communities, and active vegetation treatments to reduce invasive species populations are included within the purpose and need for the PEIS.	Common to all alternatives.	None.
Prescribed Fire, Wildfire, and Fire Suppression Treatments	PRIORITY 2	Yes	3, 26, 38, and 39	Restoration of natural fire regimes is included in the purpose and need for the PEIS.	Common to all alternatives.	None.
	PRIORITY 11	Yes	1, 3, 26, and 39	Collection of baseline data is ongoing.	Common to all alternatives.	None.
	PRIORITY 12	Yes	34	BLM Fire Management complies with the cited guidance and policy.	Common to all alternatives.	Fire management decision-making is outside the scope of analysis of the PEIS.
	PRIORITY 13	Yes	29	BLM Fire Management Planning (FMP) process includes these considerations.	Common to all alternatives.	Development of FMPs occurs at the local field office level through the National FPA process and is outside the scope of analysis of the PEIS

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Prescribed Fire, Wildfire, and Fire Suppression Treatments (Cont.)	PRIORITY 14	N/A		Wildland Fire Leadership Council provides guidance and direction on fire suppression policy at the national level.		Fire suppression policies are set at the national level, and are outside the scope of analysis of the PEIS.
	PRIORITY 15	N/A		Field Office FMPs outline local parameters for fire suppression based on resource values to be protected.		Fire suppression tactics are outside the scope of analysis of the PEIS.
	PRIORITY 16	N/A		Field Office FMPs outline local parameters for fire suppression based on resource values to be protected.		Fire suppression tactics are outside the scope of analysis of the PEIS.
Fuels Reduction	PRIORITY 3	Yes	34 and 37	Protection of human life and property is the highest priority for the BLM by policy.	Common to all alternatives.	None.
	PRIORITY 17	Yes	29, 34, and 37	All projects have a purpose and need identified for NEPA analysis.	Common to all alternatives.	None.
	PRIORITY 18	N/A		Congress determines the priorities for allocation and use of fuels reduction funds associated with the National Fire Plan (NFP).		Allocation and use of fuels reduction funds is outside the scope of analysis of the PEIS.
	PRIORITY 19	No	1, 34, and 37	Fuels reduction projects are determined based on local situations and studies, and are guided by parameters contained in local land use plans and FMPs	N/A	Would restrict flexibility of where fuels reduction activities could occur. Priority scheme would only partially meet the PEIS purpose and need.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Fuels Reduction (Cont.)	PRIORITY 20	No	33, 34, 36, and 37	Restrictions on fuels treatments are contrary to national and agency policy, as set by the Administration and Congress.	N/A	Would restrict the use of certain tools and methods to accomplish project work. Does not meet purpose and need of PEIS to use all available tools and methods.
	PRIORITY 21	No	29, 41, 43, Federal Acquisition Regulations (FAR), and Title 4 Appropriations	Fuels reduction contract restrictions are contrary to National Fire Plan Policy and the Healthy Forests Restoration Act.	N/A	Fuels reduction contracting is outside the scope of analysis of the PEIS.
Prevention Vegetation Treatments	PREVENT 1	Yes	1, 4, 16, 32, and 40	Policy under Executive Order (E.O.)	Common to all alternatives.	None.
Invasive Species	PREVENT 2	Yes	1, 28, 30, 32, and 43	BLM prevention protocols are science-based.	Common to all alternatives.	None.
Livestock Grazing	PREVENT 1	Yes	1, 22, 43. and 45	These considerations are included within the grazing management program authorizations.	Common to all alternatives.	Grazing administration is outside the scope of analysis of the PEIS.
	PREVENT 3	No				Grazing administration is outside the scope of analysis of the PEIS.
Roads and Off-Road Vehicles	PREVENT 2	Yes	1, 21, 32, and 57	BMPs for road construction activities already exist.	Common to all alternatives.	Off-road vehicle management is outside the scope of analysis of the PEIS.

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Roads and Off-Road Vehicles (Cont.)	PREVENT 4	No	1 and 57	Transportation inventory and planning in conducted during land use planning.		Out of scope. The cost of developing a GIS map and database of all BLM transportation system routes in the western U.S. would be exorbitant, and the task is not germane to the decisions to be made in the PEIS.
	PREVENT 5	Yes	1, 15, and 29	Invasive species spread analysis is a critical element of the human environment component of all BLM NEPA analyses.	Common to all alternatives.	Off-road vehicle management and planning is outside the scope of analysis of the PEIS.
	PREVENT 6	N/A	1 and 57			Vehicle route designation is a function of land use planning and is outside the scope of analysis of the PEIS.
	PREVENT 7	Yes	32	BLM prevention BMPs in place.	Common to all alternatives.	None.
	PREVENT 8	No	1, 20, 21, and 57	Designation of Open, Closed, or Limited OHV use and subsequent implementation is accomplished through land use planning.		Vehicle route designation and area closures are a function of land use planning and are outside the scope of analysis of the PEIS.
	PREVENT 9	No	57	Vegetation protection goals are developed through land use planning.		Transportation planning is outside the scope of analysis of the PEIS.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Roads and Off-Road Vehicles (Cont.)	PREVENT 10	No	10, 11, and 59	Road construction is disallowed only in non-discretionary closures (e.g., Wilderness, Wilderness Study Areas [WSAs]). Discretionary closures are developed through land use planning.		Restrictions on road construction are outside the scope of analysis of the PEIS.
	PREVENT 11	No	29	Reclamation standards for obliterating roads are guided by local land use and transportation plans.		Mandating standards for road obliteration is outside the scope of analysis of the PEIS.
Fire Suppression	PREVENT 12	Yes	3 and 29	MIST is applied as required under FMPs. Fire line reclamation standards are addressed in ESR plans following wildfire.	Common to all alternatives.	Fire suppression tactics are outside the scope of analysis of the PEIS.
Wildland Urban Interface	PREVENT 13	No	34	Federal agencies have no legal authority on private land.		Fire prevention measures for private landowners are outside the scope of analysis of the PEIS.
	PREVENT 14	No	34	Defensible community space is developed through collaborative planning with local communities and their fire protection agencies.		Fire protection and suppression tactics are outside the scope of analysis of the PEIS.
	PREVENT 15	No	34	Federal agencies have no legal authority on private land.		Fire prevention measures for private landowners are outside the scope of analysis of the PEIS.
	PREVENT 16	Yes	34	Long-term maintenance and monitoring are included in the design of vegetation treatments.	Common to all alternatives.	Budgetary commitments or allocations are outside the scope of analysis of the PEIS.

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Wildland Urban Interface (Cont.)	PREVENT 17	No	34	Restoration and fuels reduction activities are separate activities with different purposes.		Restoration priorities and assessments are developed through several layers of planning, from land use plans to watershed assessments, and are outside the scope of analysis of the PEIS.
Timber	PREVENT 3	Yes	16	Prevention of the introduction, establishment, and spread of invasive species is policy by E.O.	Common to all alternatives.	Commercial timber management is outside the scope of analysis of the PEIS.
	PREVENT 18	N/A	35	Vegetation objectives are established in land use plans.		Setting vegetation management goals is outside the scope of analysis of the PEIS.
	PREVENT 19	Yes	16, 29, 32, and 35	Project design and NEPA analysis take into consideration factors of invasive species introduction, establishment, and spread.	Common to all alternatives.	Commercial timber sales are outside the scope of analysis of the PEIS.
Altered Hydrologic Regimes	PREVENT 4	No	11, 16, 43, and 44	There are no BLM policies pertaining to invasive species and altered hydrologic regimes. Prevention of invasive species introduction, establishment, and spread is policy by E.O.		Setting goals for altered hydrologic regimes is outside the scope of analysis of the PEIS.
	PREVENT 20	Yes	11, 43, and 44	PFC assessments are used in determining riparian restoration priorities.	Common to all alternatives.	Determining treatment priorities for riparian areas is outside the scope of analysis of the PEIS.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Altered Hydrologic Regimes (Cont.)	PREVENT 21	No	11, 43, and 44	PFC assessments are used in determining riparian restoration priorities.		Restoration of native historical flow regimes is outside the scope of this PEIS.
Oil, Gas, and Mineral Exploration and Development	PREVENT 5	Yes	16	Prevention of invasive species introduction, establishment, and spread is policy through E.O.	Common to all alternatives.	Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.
	PREVENT 22	No	1	Restrictions on fluid mineral activities are developed through land use planning.		Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.
	PREVENT 23	No	1	Restrictions on fluid mineral activities are developed through land use planning.		Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.
	PREVENT 24	No	1	Seismic exploration technologies and methods involve varying degrees of surface impacts and provide different data sets; however, none are considered “best available technology” from this standpoint, as the methods utilized are based on the information needs of the operator.		Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.
	PREVENT 25	Yes	1 and 29	Standard Operating Procedures (SOPs) and Conditions of Approval (COAs) for APDs are developed through land use planning and NEPA analysis.		Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Oil, Gas, and Mineral Exploration and Development (Cont.)	PREVENT 26	Yes	1 and 29	BMPs are applied as mitigation resulting from NEPA analysis.		Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.
	PREVENT 27	Yes	1 and 29	SOPs and COAs for APDs are developed through land use planning and NEPA analysis.		Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.
	PREVENT 28	Yes	29 and 32	Prevention measure incorporated into mineral materials permit authorizations.		Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.
	PREVENT 29	Yes	29	ESA consultation is required for all federal actions involving TES species.		Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.
	PREVENT 30	No	N/A	There is no statute, regulation, or E.O. that outlines a “no net loss” policy to adopt for special status plant species.		Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.
	PREVENT 31	Yes	43 CFR 3162.3-1(2)	Surface use plans are required with each APD.		Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.
	PREVENT 32	Yes	1 and 29	SOPs and COAs for APDs are developed through land use planning and NEPA analysis.		Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Oil, Gas, and Mineral Exploration and Development (Cont.)	PREVENT 32	Yes	1 and 29	SOPs and COAs for APDs are developed through land use planning and NEPA analysis.		Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.
	PREVENT 34	Yes	1, 29, and 43 CFR 3162.3-1	SOPs and COAs for APDs are developed through land use planning and NEPA analysis.		Oil, gas, and mineral exploration and development operations are outside the scope of analysis of the PEIS.
Disturbance to Biological Soil Crust	PREVENT 6	No	12	There are no national policies regarding biological soil crusts and invasive species prevention.	Alternative E	Biological soil crusts are addressed in the PEIS.
	PREVENT 35	No	1 and 29	Inventory of resources is a function of land use planning and site-specific NEPA analysis.		Out of scope. The cost of mapping all biological soil crusts at the ecoregion and watershed level across 17 western states would be exorbitant.
	PREVENT 36	Yes	12 and 29	Resource damage and mitigation are addressed through project-level NEPA analysis.	Common to all alternatives.	SOPs for biological soil crusts relative to herbicide use are presented in the PEIS.

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Disturbance to Biological Soil Crust (Cont.)	PREVENT 37	No	3, 12, and 29	Livestock exclusion policies for ESR projects are two growing seasons, and may be extended at the discretion of he BLM based on resource recovery objectives.	Alternative E would extend livestock exclusion for biological crust recovery to five years.	Current policy is a minimum of two growing seasons and is tied to meeting multiple resource recovery objectives as defined in the ESR plan, not to recovery specifically for biological soil crusts. Livestock would be displaced longer under Alternative E to allow for recovery. Biological crusts would have up to another three years for recovery.
Prevention of Excess Fuels	PREVENT 7	No	5, 22, and 23	The BLM has no policies to maintain densities of shrub and tree establishment at historical levels to prevent excess fuels. Historical densities may be characterized by excess fuels in some cases.		Determining historical densities of shrub and tree establishment is outside the scope of analysis of the PEIS.
	PREVENT 38	No	5, 22, and 23	Standards and guidelines are established under 43 Code of Federal Regulations (CFR) 4100 and local Resource Advisory Councils (RACs), which guide decisions for reduction or elimination of grazing.		Out of scope. Livestock grazing levels in any plant community are determined through grazing authorizations under 43 CFR 4100.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Prevention of Excess Fuels (Cont.)	PREVENT 39	No	5, 22, and 23	Livestock exclusion policies for ESR projects entail two growing seasons, and may be extended at the discretion of the BLM based on resource recovery objectives.	Alternative E would extend livestock exclusion in forest and shrublands to five years.	Current policy requires a minimum of two growing seasons, and is tied to meeting multiple resource recovery objectives as defined in the ESR plan, not to recovery specifically for biological soil crusts. Livestock would be displaced longer under Alternative E to allow for recovery. Forests and shrublands would have up to another three years for recovery.
	PREVENT 40	Yes	5, 23, and 34	Local FMPs outline the use of fire for resource benefit and prescribed fire for each burnable acre.	Common to all alternatives.	Development of FMPs occurs at the local level through the National FPA process, and is outside the scope of analysis of the PEIS.
Restoration Vegetation Treatments	RESTORE 1	Yes	4, 32, and 43	The BLM uses an IWM approach to vegetation treatments.	Common to all alternatives.	None.
	RESTORE 2	Yes	4, 29, 30, 31, 32, and 43	Potential effects of projects on resources and species are analyzed at the site-specific level under NEPA.	Common to all alternatives.	Site-specific NEPA assesses effects on resources and habitats that are present and does not rely on “umbrella” species.
	RESTORE 3	Yes	4 and 32	The BLM uses an IWM approach that includes all treatment methods.	Common to all alternatives.	Addressed in the PEIS.

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Restoration Vegetation Treatments (Cont.)	RESTORE 4	Yes	41 and 42	Ecological priorities and treatment area characteristics are considered in vegetation treatment design.	Common to all alternatives.	None.
	RESTORE 5	Yes	16	E.O. policy requires infestations to be treated where found and to prevent their further spread.	Common to all alternatives.	None.
Guideline	RESTORE 1	Yes	65 and Wilderness Act	The BLM utilizes the Carhart Model for minimum requirements analysis and impact tool requirements in Wilderness and WSAs.	Common to all alternatives.	None.
	RESTORE 6	Yes	4, 8, 16, 32, and 58	The BLM utilizes an IWM approach to vegetation treatments.	Common to all alternatives.	None.
	RESTORE7	Yes	4, 8, 16, 32, and 58	BLM treatment priorities for invasive species infestations are developed through an IWM framework. Seasonal employees and volunteers detect and control small infestations.	Common to all alternatives.	None.
	RESTORE 8	Yes	ARS, TAG	Biological controls are authorized through ARS and approved through the national level multi-agency Technical Advisory Group (TAG). The BLM does not utilize or introduce any biological control agent that has not been approved or scientifically validated through the ARS/TAG testing programs.	Common to all alternatives.	None.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Guideline (Cont.)	RESTORE 9	Yes	4	The BLM utilizes cultural treatments in an IWM framework, which includes these considerations.	Common to all alternatives.	None.
	RESTORE 10	Yes	4	BLM IWM and ESR practices consider the use of native seed and plants to compete with exotic species.	Common to all alternatives.	None.
	RESTORE 11	Yes	4	The BLM utilizes mechanical treatments in an IWM framework that includes these considerations. The BLM also participates in and helps fund operational research into effective mechanical methods.	Common to all alternatives.	None.
	RESTORE 12	Yes	4, 8, and 58	The BLM implements SOPs, best management practices, training, and certification to ensure that chemical applications minimize exposure to humans, plants, and wildlife.	Common to all alternatives.	None. Addressed in the PEIS.
	RESTORE 13	Yes	58	BLM spray buffer zones for TES or rare species are determined as a result of specific ESA consultation with USFWS and/or NMFS.	Alternative E would mandate 500 feet from any threatened, endangered, or sensitive (TES), or rare species.	None. Regardless of buffer distance, protection of TES or rare species would occur under all alternatives.
	RESTORE 14	Yes	58	Restrictions or prohibitions to spraying in areas of sensitive resources, such as riparian areas and aquatic and amphibian species habitat, are considered in any spray program.	Common to all alternatives.	None. Atrazine has not been used by the agency in over ten years.

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Guideline (Cont.)	RESTORE 15	No	58	BLM policy is to survey an area for TES prior to any chemical pest control program.	Alternative E would prohibit the use of herbicides in known aquatic and terrestrial and amphibian habitat.	There would be greater protection of aquatic and terrestrial amphibians from herbicide use within known habitat under Alternative E. Noxious or invasive species infestations in known aquatic and terrestrial amphibian habitat may be harder to control and take longer to control without the ability to use herbicides.
	RESTORE 16	No	58	The BLM assesses the effects of herbicides through detailed toxicological studies and risk assessments to ensure that the active ingredients used are capable of minimizing adverse effects on environmental and human health.	Alternatives A, B, and D. Alternative E would require toxicology studies on all ingredients in formulation prior to approval and use.	Addressed in the PEIS. The BLM conducts toxicology studies on the active ingredients of the herbicide and relies on the FIFRA registration process of the EPA for data relative to other ingredients in the formulation, including confidential business information (CBI). The BLM certifies its agency toxicologists to review CBI data as part of the BLM toxicology assessment.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Guideline (Cont.)	RESTORE 17	No	58	The BLM utilizes sulfonylurea and ALS-inhibiting herbicides.	Alternatives A, B, and D.	Addressed in the PEIS. Alternative E was developed and analyzed to address use of sulfonylurea and ALS-inhibiting herbicides.
	RESTORE 18	Yes	4, 29, and 58	These considerations and compliance with the Migratory Bird Treaty Act (MBTA) are considered when designing vegetation treatment projects.	Common to all alternatives.	None.
Prescribed Fire	RESTORE 19	Yes	3, 33, and 34	These considerations are required by policy under the Federal Wildland Management Policy.	Common to all alternatives.	None.
	RESTORE 20	Yes	29	These considerations, if relevant, are documented in the site-specific NEPA analysis prior to project implementation.	Common to all alternatives.	None.
	RESTORE 21	No	3, 33, and 34	Livestock exclusion policies for ESR and prescribed fire projects are two growing seasons, and may be extended at the direction of the BLM based on resource recovery objectives.	Alternative E would extend livestock exclusion from all burned areas (natural or prescribed) for five years.	Current policy is a minimum of two growing seasons and is tied to meeting multiple resource recovery objectives as defined in the ESR or Prescribed Fire plan. Livestock would be displaced longer under Alternative E to allow for recovery. Burned areas would have up to another three years for recovery.

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Prescribed Fire (Cont.)	RESTORE 22	Yes	Prescribed Fire Handbook	These considerations are part of the Prescribed Fire Burn Plan.	Common to all alternatives.	Prescribed fire tactics and burn plan requirements are outside the scope of analysis of the PEIS.
Fuels Reduction	RESTORE 23	Yes	3 and 33	Fuels reduction activities to restore natural fire processes are based on plans and assessments with clear objectives. The BLM utilizes an IWM approach to vegetation treatments, which includes consideration of combinations of active and passive methods.	Common to all alternatives.	None.
	RESTORE 24	No	3, 34, 37, 39, and 63	Post-fire assessments and ESR plans are used to determine the disposition of standing trees. Commercial salvage or stewardship contracts may be utilized on standing trees following fire. Standing snags are valued as wildlife habitat features, and are left intact to meet habitat objectives and where public safety is not compromised.		Disposition of standing trees following fire in based on resource and other land use objectives, and is outside the scope of analysis of the PEIS.
Fire Suppression	RESTORE 25	Yes	32	Vehicle equipment cleaning is a standard fire program prevention measure. Fire line rehabilitation is considered in the ESR plan.		Fire suppression tactics are outside the scope of analysis of the PEIS.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Fire Suppression (Cont.)	RESTORE 26	No	3, 4, and 34	Post-fire disturbance is minimized where possible; however, some burn areas may require extensive and immediate rehabilitation work using mechanical methods to stabilize watersheds to minimize post-fire flooding from erosion due to loss of plant cover. ESR plans outline the measures that are required for recovery of burned areas.	Alternatives A, B, C, and D. Alternative E would rely on natural recovery over stabilization and rehabilitation.	Determining ESR objectives following fire is outside the scope of analysis of the PEIS.
	RESTORE 27	Yes	39	All fire suppression-related logistical facilities, such as fire camps, helispots, equipment staging areas, and fire lines, are rehabilitated as part of the post-fire operations. Monitoring occurs as needed.		Fire suppression tactics and related support infrastructure are outside the scope of analysis of the PEIS.
Forage Enhancement	RESTORE 28	No	16	Forage enhancement project objectives are based on land use plan goals. Project objectives may not necessarily include objectives to encourage native species or result in no net loss of native plant communities	N/A	Forage enhancement projects are outside the scope of analysis of the PEIS.
Revegetation	REVEG 1	Yes	4	The BLM utilizes native seeds and seedlings from locally-adapted sources, where possible.	Common to all alternatives.	None.

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Revegetation (Cont.)	REVEG 2	No	4 and 32	Native seed availability does not drive rehabilitation project feasibility or implementation. Intermediate species may be used when native seed is unavailable. Project funding and implementation for ESR projects is required within the same season as the fire event, and projects may be funded for up to 3 years post fire. BLM funding is determined annually by Congress, and funding processes do not allow the agency to set aside funds for out-year project work.		Native seed availability and funding mechanisms for vegetation treatment are outside the scope of analysis of the PEIS.
	REVEG 3	No	3, 39, and FAR	All seed bought and used by the BLM is required to be noxious weed free. There are no industry standards for defining and screening out non-native species "persistence" in seed mixes.	Common to all alternatives.	None.
	REVEG 4	Yes		BLM has no authority to provide growers seed purchase assurance. Contracting procedures can utilize indefinite delivery and indefinite quantity (IDIQ) provisions for seed contracts. BLM seed storage facilities are sufficient for major revegetation efforts.	Common to all alternatives.	None.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Revegetation (Cont.)	REVEG 5	No		Habitat requirements for extirpated species are determined in conjunction with state wildlife agencies, USFWS recovery plans through ESA consultation procedures, and land use plan goals and objectives.		Determining specific analysis requirements (i.e., extirpated species) for landscape, watershed, and sub-watershed assessments is outside the scope of analysis of the PEIS.
	REVEG 6	No		State wildlife agency and USFWS recovery plans outline the potential for reintroduction of extirpated species into specific areas.		Outside of agency purview.
	REVEG 7	Yes	4, 32, 40, *et al.*	Collaboration with federal, state, local, and private land managers is outlined and required in numerous national policy documents.	Common to all alternatives.	None.
	REVEG 8	Yes	4, 32, and 40	Ongoing public education practice throughout BLM field offices.	Common to all alternatives.	None.
	REVEG 9	Yes	4, 32, and 40	Standard considerations in ESR plan development. Reseeding criteria may include the potential for severe erosion within the first two seasons following fire, and may not necessarily be tied to natural regeneration potential.	Common to all alternatives.	None.
Monitoring and Evaluation	MONITOR 1	Yes	9, 11, 40, and 43	Baseline data, existing conditions, and monitoring data are all considered in vegetation treatment project design.	Common to all alternatives.	Funding allocations for baseline data gathering and monitoring are outside of the scope of analysis of the PEIS.

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Monitoring and Evaluation (Cont.)	MONITOR 2	No	9, 11, 40, and 43	Baseline conditions, as well as monitoring goals and objectives, are identified based on local data needs and the type of monitoring that needs to be accomplished for the specific project proposal.		Determining baseline conditions at multiple spatial scales for landscapes, watersheds, sub-watersheds, and projects is outside the scope of analysis of the PEIS.
	MONITOR 3	No	9, 11, 40, and 43	Monitoring and evaluation take into consideration most of the points addressed, with the exception of documentation into a central database for 17 states.		Determining specific monitoring features is outside the scope of analysis of the PEIS. BLM databases are not centralized, however, the BLM is working on national level data sets for monitoring through the National Monitoring Initiative.
	MONITOR 4	Yes	9, 11, 40, and 43	Monitoring methods contain these considerations.	Common to all alternatives.	None.
	MONITOR 5	Yes	9, 11, 40, and 43	Each project proposal must conform to relevant goals and objectives, as identified in guiding land use and other plans. Monitoring is built on project proposals.	Common to all alternatives.	None.
	MONITOR 6	Yes	1, 9, 11, 40, and 43	Objectives and standards are written to be measurable and quantifiable. Professional judgment is also used, as appropriate.	Common to all alternatives.	None.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Monitoring and Evaluation (Cont.)	MONITOR 7	No	9, 11, 40, and 43	There are currently no BLM program requirements for each field office to prepare an annual monitoring report to be reported through a central database. However, features of the BLM's National Monitoring Initiative, such as a national website, will serve as a clearinghouse for monitoring reports and summaries as they are developed.		Field office monitoring reporting is outside the scope of analysis of the PEIS.
	MONITOR 8	No	9, 11, 40, and 43	Monitoring uses different time intervals for different programs or projects. For example, Land Use Plan monitoring is set by regulation at 5-year intervals.		Field office monitoring reporting is outside the scope of analysis of the PEIS.
	MONITOR 9	Yes	9, 11, 40, and 43	Project design includes a description of the relevant required monitoring.	Common to all alternatives.	None.
	MONITOR 10	No		The type of annual monitoring plan related to oil and gas activities is not defined in the RNE submission.		Oil and gas operations are outside the scope of analysis of the PEIS.
	MONITOR 11	No	9, 11, 34, 39, 40, and 43	All fire-suppression-related logistical facilities, such as fire camps, helispots, equipment staging areas, and fire lines, are rehabilitated as part of the post-fire operations. Monitoring occurs as needed.		Fire suppression tactics and related support infrastructure, monitoring, and frequency of monitoring are outside the scope of analysis of the PEIS.

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Monitoring and Evaluation (Cont.)	MONITOR 12	Yes	9, 11, 40, 43, and 50	Monitoring progress toward attainment of long-term health and integrity of watersheds for specific resources is guided by the resource monitoring requirements of the program, regulation, or statute.	Common to all alternatives.	Resource program monitoring is outside the scope of analysis of the PEIS.
Tribal Relations	TRIBES 1	Yes	19 and 60	Tribal consultation is part of the government-to-government and fiduciary trust responsibilities of the federal government.	Common to all alternatives.	None.
	TRIBES 2	Yes	19 and 60	Tribal consultation is part of the government-to-government and fiduciary trust responsibilities of the federal government.	Common to all alternatives.	None.
	TRIBES 3	Yes	19, 60, and E.O. 12898	Environmental Justice must be included in all BLM and NEPA analyses.	Common to all alternatives.	None.
	TRIBES 4	Yes	19, 60, 62, and 63	To the extent shared by Tribal representatives, culturally significant resources and places are identified by the BLM.	Common to all alternatives.	None.
	TRIBES 5	No	63	Identification and protection of resources of cultural significance to Native Americans is accomplished through site-specific consultation.	Alternatives A, B, C, and D. Alternative E would require development of protocols for enhancement of culturally significant plants.	None.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Tribal Relations (Cont.)	TRIBES 6	No	60	The BLM does not establish herbicide-free zones for any resources. Use of herbicides is determined based on project needs in an IWM framework and the results of Native American consultation. In those cases where herbicides are not compatible with resources or resource uses, alternate treatment methods are considered.	Alternative E.	Establishment of buffers is addressed in the PEIS.
	TRIBES 7	Yes	E.O. 12898, and EPCRA	Notification occurs in compliance with E.O. 12898 for Native Americans and at-risk populations, as well as all publics under community right-to-know statutes.	Common to all alternatives.	None.
	TRIBES 8	No	63	Monitoring has been addressed above. There are no requirements under FLPMA or Native American statutes that require protection of culturally significant plant and animal resources for seven generations.		Planning for seven generations is outside the scope of analysis of the PEIS.
Coordination, Education, and Public Awareness	CEPA 1	Yes	32	The Partners Against Weeds (PAW) Action Plan provides for identifying prevention activities.	Common to all alternatives.	None.
	CEPA 2	No	29, 32, and 43	Site-specific treatment decisions are based on NEPA analyses.	Common to all alternatives.	None.

TABLE I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

Goal	Action	Current BLM Policy (Yes/No)	Policy Source (refer to key at end of table)	Policy Analysis	Alternative Comparison	Programmatic Net Effect or Impact if Different from PEIS/PER Analysis
Coordination, Education, and Public Awareness (Cont.)	CEPA 3	Yes	National websites	National websites exist for invasive species, fire management, and the BLM's weed program. Not all websites are structured to provide a comprehensive lessons learned venue for vegetation treatment projects.		Development of central websites and populating them with vegetation treatment project information is outside the scope of analysis of the PEIS.
	CEPA 4	Yes	43	The BLM has various incentives and awards programs in place for vegetation management and land stewardship, as well as weeds and invasive species control and management.	Common to all alternatives.	None.
	CEPA 5	No	43	BLM funding for vegetation treatments does not follow the process assumed under CEPA 5.		Funding and budget allocations are outside the scope of analysis of the PEIS.
	CEPA 6	Yes	32 and 40	Fire Wise and invasive species education are ongoing aspects of the BLM's Fire Program and Invasive Species Program.	Common to all alternatives.	None.

Key to policy source references:

1. Land Use Planning Handbook (BLM H-1601-1) 2000.
2. Land Use Planning (BLM 1601-1).
3. Emergency Fire Rehabilitation Handbook (BLM H-1742), July, 1998 (http://www.blm.gov/nhp/efoia/wo/fy98/im98-148.html).
4. BLM Manual 9015 - Integrated Weed Management.
5. BLM Manual H-4180 - Rangeland Health Standards.
6. BLM Manual Section 660 - Fish, Wildlife and Special Status Plant Resource Inventory and Monitoring .
7. Departmental Manual Part 517: Pesticide Use Policy.
8. Departmental Manual Part 609: Weed Control Program.
9. BLM Inventory and Monitoring (TR 1734-7) Ecological Site Inventory, December, 2001.
10. BLM Riparian-Wetland Area Management (TR-1737).
11. BLM Riparian Area Management (TR 1737-15), 1998.

Table I-1 (Cont.)
Bureau of Land Management Analysis of Restore Native Ecosystems Proposal

12. BLM Biological Soil Crusts: Ecology and Management (TR 1730-2), 2001.
13. Final Environmental Impact Statement Vegetation Treatment on BLM Lands in Thirteen Western States, May, 1991.
14. (http://elips.doi.gov/elips/release/3042.htm). Date accessed: 1/28/03.
15. Instruction Memorandum No. 99-178, Subject: Interim Guidance – Changes to the list of critical elements of the human environment in BLM's National Environmental Policy Act (NEPA) Handbook. (http://www.blm.gov/nhp/efoia/wo/fy99/im99-178.htm). Date accessed: 2/5/03.
16. Executive Order 13112 - Invasive Species (February 3, 1999).
17. Executive Order 11987- 42 F.R. 26949 – Exotic Organisms (May 24, 1977).
18. Executive Order 11514 - Protection and Enhancement of Environmental Quality (March 7, 1970).
19. Executive Order 13175 - Consultation and Coordination with Indian Tribal Governments (http://www.epa.gov/fedrgstr/eo/eo13175.html).
20. Executive Order 11644 - Use of off-road vehicles on the public lands (February 8, 1972).
21. Off-Road Vehicles (43 CFR Part 8340).
22. Authorized Grazing Use (43 CFR Subpart 4130).
23. Rangeland Health Standards (43 CFR 4180.09).
24. Standards and guidelines for grazing administration (43 CFR 4180.2).
25. EIS for Surface Management Regulation for Locatable Mineral Operations, (43 CFR 3809), October 2000.
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